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Remarks

Claims 1-21 are in the application. Claims 1, 8, and 15 are in independent form.

The Examiner acknowledges the claim for domestic priority under 35 USC 119(e) from provisional application no. 60/100,423. The states, however, that the provisional application fails to provide adequate support under 35 USC 112 for claims 1-21. In particular, the Examiner states that "figures 5-7 and a matter directed to the 'Prisoner's Dilemma' embodiment is not supported by the provisional application. Applicants respond as follows.

Applicants note that a description of the Prisoner's Dilemma embodiment is described in the provisional application beginning at page 3, first full paragraph. In addition, the user interface of application Fig. 5 is shown at page 4 of the provisional application, and the graph of Fig. 7 of the application is shown at page 6 of the provisional application. Many features of application Fig. 6 are described in the provisional application in the section labeled "The Validation Study" beginning on page 3. Applicants submit, therefore, that the Examiner has incorrectly identified as omissions subject matter that is shown or described explicitly in the provisional application. Applicants request, therefore, that this rejection be withdrawn.

The Examiner states that the applicants have published an academic paper titled "The Commons: A toolbox for qualitative analysis of factors in the success or failure of electronic societies," and requests a date of publication of the document. The Examiner further notes, and applicants acknowledge, applicants' duty of disclosure under 37 CFR 1.56.

Applicants note that the paper cited by the Examiner is included in provisional application no. 60/100,423, to which priority in the present application is claimed under 35 USC 119(e). The provisional application was filed September 15, 1998. It is the understanding of applicants' attorney that at the time of the filing of the provisional application that the paper was unpublished. Applicants provide as Attachment 1 in response to the Examiner's request a

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listing of papers by inventor Steven M. Drucker showing a date of 1999 for the cited paper. Applicants have no information that the paper was published more than a year before the filing of the present application. As a result, the paper is not relevant to the examination of the present application and is not required to be included in an information disclosure statement.

Claims 1-7 and 15-21 stand rejected under 35 USC 101 as being directed to non-statutory subject matter. The Examiner states that the claims appear to recite a computer program product. Applicants respond as follows.

Independent claim 1 recites software objects in a computer readable medium. Independent claim 15 recites an online interactive communications evaluation system in a computer-readable medium. The Examiner is required to treat a claim as a product claim under 35 USC 101 "when a computer program is recited in conjunction with a physical structure, such as a computer memory." (MPEP 2106) As explained in MPEP 2106, "when functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized." Claim 1 and 15 recite such a "computer readable medium" with functional descriptive material. There is no statutory or regulatory requirement that such a claim recite the phrase "when executed," as suggested by the Examiner. Applicants request, therefore, that this rejection be withdrawn.

Claims 1-21 stand rejected under 35 USC 112, first paragraph, as containing subject matter not described in the specification in such a way as to enable one skilled in the art to make or use the invention. In support of the rejection, the Examiner states that "the instant application contains subject matter not supported by the provisional application." Applicants respond as follows.

Applicants submit that this rejection is improper and should be withdrawn because the Examiner has cited no feature in any claim that is not supported by the specification of the present application. 35 USC 112, first paragraph states that:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. (Emphasis added.)

The "specification" referenced in the statute is the specification of the application with the claims at issue. In the present instance, this means that the requirements of 35 USC 112, first paragraph, are to be considered with regard to the specification of present application No. 09/392,678 and the claims of present application No. 09/392,678. The Examiner has cited no lack of enablement in the present application with respect to the claims in the present application.

The Examiner has stated only that the claims are not supported in the provisional application. The provisional application is not the correct text to consider whether claims 1-21 of the present application meet the requirements of 35 USC 112, first paragraph. The correct text to consider whether claims 1-21 of the present application meet the requirements of 35 USC 112, first paragraph, is the specification of present application No. 09/392,678. Accordingly, applicants submit that the rejection of claims 1-21 under 35 USC 112, first paragraph, for lacking support in the provisional application is improper and should be withdrawn.

Claims 1-21 stand rejected under 35 USC 103(a) for obviousness over (Grobelnik or Noise-IPD Game Contest or Brown) in view of (Honda et al. or Saar). The Examiner states that Grobelnik or Noise-IPD Game Contest or Brown discuss all claim limitations, except playing a Prisoner's Dilemma game via a multi-user virtual society. Honda et al. and Saar are cited as disclosing virtual environments. The Examiner concludes that combining the references would be obvious because Honda et al. and Saar say that virtual environments provide interaction or collaboration benefits. Applicants respond as follows.

The Examiner states that "the invention appears to be an interactive 'Prisoner's Dilemma' game played over the internet." While allowed to interpret the claim as broadly as is reasonable, the Examiner must account for each and

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every element or feature recited in the claim. Applicants submit that the claims include features not addressed by the Examiner or in the rejection and that by virtue of those features the subject matter of claim 1 is more than simply "an interactive 'Prisoner's Dilemma' game played over the internet."

Original claim 1 recites software objects of a social dilemma virtual world environment, including:

- one or more social dilemma exercise objects for implementing a social dilemma exercise between the participants; and
- a computer-based communication object for selectively providing computer-based communication between participants in the social dilemma exercise.

Claim 1 has been amended to clarify that the software object are "interfaced" software objects, which are described in the application as providing "software services such as methods 52 or properties 54 that are accessed by one or more interfaces 56 (multiple shown)." (Application page 6, lines 23-26.) As described in the application at page 14, lines 13-19, the use of separate interfaced software objects provides several benefits:

The separation of the model and the view provides encapsulation of the interface implementation separate from the exercise (i.e., functional) implementation and from other interface objects. This allows independent development of different interface items. It also allows different interfaces to be attached to the same exercise at different times or for different users (e.g., "participant" versus "administrator").

None of the references cited by the Examiner provide a social dilemma virtual world environment that is structured with the interfaced software objects recited in claim 1. Moreover, none of the cited references teaches or suggests the purpose or benefits of the recited combination of interfaced software objects in relation to characterizing the effects of computer communications through use of social dilemma exercises like the Prisoner's Dilemma.

Social factors that can be evaluated with the social dilemma VWE software may include the availability or absence of unstructured communications such as with synchronous text chat, asynchronous text chat (e.g., e-mail), verbal or audio communication, still or motion video communication, historical, social, or other background information about

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others, etc. (Application page 3, lines 8-13.)

Moreover, claim 1 recites that the interfaced computer-based communication object selectively provides computer-based communication between participants in the social dilemma exercise. Selectively providing computer communication (i.e., selectively providing computer communication or not providing it) is the basis for characterizing the effects of computer communications through use of social dilemma exercises like the Prisoner's Dilemma. If computer communications are not selective in a social dilemma exercise, there is no basis for changing the use or characterizing the effects of computer communications. Applicants submit that the cited references provide no teaching or suggestion of selectively providing computer communications in combination with execution of social dilemma exercises.

Furthermore, the Examiner justifies the combination of references based upon generalized statements of "benefits" in the Honda et al. and Saar references. Applicants submit that these generalized statements of "benefits" provide no teaching or suggestion that the particular cited references be combined, or of the invention as claimed. Rather, applicants submit that these generalized statements of "benefits" amount to nothing more than an improper "obvious to try" justification for the rejection. For the foregoing reasons, applicants submit that the rejection of claim 1 is improper and request that the rejection be withdrawn.

Applicants believe each of dependent claims 2-7 is allowable for depending from an allowable base claim. In addition, applicants believe specific claims are further allowable for the following reasons.

Dependent claim 2 specifies computer readable media locations where interfaced social dilemma exercise objects are located. None of the cited references teaches or suggests the recited interfaced social dilemma exercise objects or the recited computer readable media locations. Dependent claim 3 further recites interfaced user interface objects at the client computers. As described in the application, the separate interfaced user interface objects

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facilitates control of different user interfaces for characterizing the effects of computer communications through use of social dilemma exercises. None of the cited references teaches or suggests such a software structure or use of social dilemma exercises for characterizing the effects of computer communications. Applicants request, therefore, that the rejection of claims 2 and 3 be withdrawn.

Dependent claim 5 specifically recites that the interfaced computer-based communication object selectively provides synchronous text chat. None of the cited references teaches or suggests an interfaced software object for selectively providing computer-based communication, or selectively providing synchronous text chat. Being directed at most to simply playing the Prisoner's Dilemma, the cited references have no basis for selective provision of participant communication. Applicants request, therefore, that the rejection of claim 5 be withdrawn.

Dependent claims 6 and 7 further recite a social dilemma exercise log file that records computer-based communications between the participants. To the extent any of the cited references is directed to recording any information about Prisoner Dilemma games, there is no teaching or suggestion to record computer-based communications between the participants. Applicants submit that such records can be used in characterizing effects of computer communications, as described in the application. The cited references provide no teaching or suggestion of recording such communications in the context of social dilemma exercises. Applicants request, therefore, that the rejection of claims 6 and 7 be withdrawn.

Independent claim 8 recites a method of evaluating online interactive communications, the method including the steps of:

- selecting a first set of social factor objects and interface factor objects for conducting a social dilemma exercise;

- selecting a second set of social factor objects and interface factor objects for conducting the social dilemma exercise, at least one of the objects in the first and second sets being different;

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conducting for plural participants social dilemma exercises according to the first and second sets of objects; and
logging results of the social dilemma exercises.

The method of claim 8 relates to characterizing the effects of computer communications through use of social dilemma exercises like the Prisoner's Dilemma, as described in the application at page 3, lines 8-13.

Social factors that can be evaluated with the social dilemma VWE software may include the availability or absence of unstructured communications such as with synchronous text chat, asynchronous text chat (e.g., e-mail), verbal or audio communication, still or motion video communication, historical, social, or other background information about others, etc.

None of the cited references teaches a method in which social factor objects and interface factor objects are used to conduct social dilemma exercises. The object-based structure facilitates making changes to the social factors or the user interface factors in the social dilemma exercises. None of the cited references provides such an object-based structure or the resulting versatility.

In addition, none of the cited references teaches a method in which at least one of the social factor objects and interface factor objects is different in the social dilemma exercises, or logging the results of the social dilemma exercises with and without the different object. As described in the application, this object-based structure facilitates the use of different objects to characterize the effects of computer communications through use of social dilemma exercises, such as from the logged results of the social dilemma exercises. The cited references do not even hint at logging results of social dilemma exercises in which a social factor or an interface factor is changed. Applicants submit, therefore, that the rejection of claim 8 is improper and request that the rejection be withdrawn.

Applicants believe each of dependent claims 9-14 is allowable for depending from an allowable base claim. In addition, applicants believe specific claims are further allowable for the following reasons.

Dependent claims 9-11 recite specific features or factors over which the

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software objects provide control. The claims, as dependent of claim 8, allow that one of the recited features or factors may be changed between different social dilemma exercises. Changing these or other features allow the social dilemma exercises to be used in characterizing the effects of the features. None of the cited references teaches or suggests such object-based structures or changing them in different social dilemma exercises. Applicants submit, therefore, that claims 9-11 are further patentably distinct.


Dependent claim 13 specifies computer readable media locations where social factor objects and interface factor objects are located. None of the cited references teaches or suggests the recited objects or the recited computer readable media locations. Dependent claim 14 further recites user interface objects at the client computers. As described in the application, the separate objects facilitate control of different features in the social dilemma exercises. None of the cited references teaches or suggests such a software structure or the benefits it provides. Applicants request, therefore, that the rejection of claims 13 and 14 be withdrawn.

Independent claim 15 recites an online interactive communications evaluation system in a computer-readable medium. The features of claim 15, and its dependent claims 16-21, are analogous to the subject matter of respective claims 8-14. Applicants submit, therefore, that claims 15-21 are allowable for the reasons set forth above with regard to claims 8-14.

Applicants believe the application is in condition for allowance and respectfully request the same.

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Steven M. Drucker's Papers

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-  The Commons: A Toolkit for the Quantitative Analysis of Factors in the Success or Failure of Electronic Societies, Joshua Berman, Steven M. Drucker, Peter Kollock, Internal Report, 1999.
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